## U.S. AMLR Program and National Science Foundation

# 2011-2012 Weekly Field Reports Copacabana, King George Island

Volume 2 October 24, 2011

#### Science report:

1. Penguins: As of today (10/30), Adélie penguins are past the peak of egg-laying, with about 70% of the nests with eggs. Most of the nests in the reproductive study sites now have eggs and both members of each pair have been banded. Also at this time, we collect Adélie penguin adult weights & egg 1 measurements, to be used as an indicator of adult condition at the start of the breeding season. Today (10/30), we selected 50 nests at the Point Thomas colony (near the Polish station) with both adults present & only 1 egg, then weighed both adults, & measured & weighed the egg. Initial findings show that the mean adult weights are the highest ever recorded over the last 20 years, even greater than last year's highs. The mean egg volume is also the highest ever recorded for the same 20-year period, which may indicate very good food availability for the females prior to coming ashore to breed. All these results point to the adults being in very good condition upon arrival. Since Adélie penguins spend the winter on pack-ice, the cold, heavy-ice winter this year means that they likely had a more extensive winter habitat that was relatively close to their breeding colonies, resulting in shorter travel times, less energy expenditure, and better arrival conditions.

Even though the gentoo penguins started laying eggs after the Adélie penguins this year, they are much farther along, with about 85% of the nests with eggs. Most of the nests in the reproductive study sites now have eggs and one member of each pair banded. Once all of the penguin nests have 2 eggs, they will go on the "full nest check" schedule, meaning they are only checked every 4 days, to minimize disturbance.

The first chinstrap penguin was seen recently and 2 or 3 have been seen regularly around the colony since. We typically have 2 or 3 pairs breeding among the Adélie & gentoo penguins on Copa Beach every year, and 2 of the early male arrivals are already building & defending nests there. No females have shown up yet, but their mean clutch initiation date is typically around the end of November, so it is still early.

2. Skuas: More skuas are arriving daily & several of the pairs that control penguin territories are back together again. Mostly only brown skuas have been seen, so far, since the few south polar skuas we have around Copa usually don't arrive until later. During our visit to Arctowski last week, we saw many brown

skuas occupying territories and a few south polar skuas in a group by a lake (also referred to as a "club") – the only south polar skuas seen so far. We hope to begin our regular skua checks at Point Thomas (the area near Arctowski) next week during our visit.

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Volume 1 October 11, 2011

3. Sheathbills/Gulls/Giant Petrels: 4-6 sheathbills have been seen regularly among the penguins, mostly in the beach areas. Most of them are unbanded, but one of our banded breeders, "Rasta", has returned. He never got a mate last year, so didn't breed, but we're hoping he gets one this year.

The giant petrels are already occupying nests in the colonies around Copa & Point Thomas. They are also back in the many new areas that they colonized last year. These birds are quite skittish & easily disturbed, so we don't go near them until early-mid December, when we do a nest census.

5. Seals: Still no leopard seal kills have been observed, but we have seen individuals on ice floes going by, presumably from ice breaking out of the inlets in the bay. Saturday (10/29), we saw 2 separate individuals on pieces of ice that were grounded on the beach, so were able to get a good look at them & get some pictures. Saturday was also our first complete seal census for the beaches from Sphinx (south of Copa) to Point Thomas (on the far side of Arctowski). In addition to the 2 leopard seals, we counted 2 Weddell seals (a mother & her pup), several elephant seals (including a harem bull & 2 females with their pups), & some fur seals, but no crabeater seals this time.

### **Camp Activities:**

Most of the gutters were put up last week, during a stretch of calm, warm weather. Snow was shoveled onto the roof to melt into the gutters, which empty into barrels for our water supply. We have also filled 2 fish boxes with snow, to be used as emergency water later in the season, if necessary.

#### Weekly Weather:

Wednesday (10/26) was stormy, with strong winds & some snow – gusts over 50 mph (with a high of 67 mph) were recorded at the hut & the Poles said they had gusts over 150 mph at Arctowski. Thursday & Friday (10/27 & 10/28) were calm & beautiful, with warm temperatures near 40, resulting in more of the snow melting around the area. Saturday morning (10/29) was calm, but soon changed, with strong winds, snow, & cold temperatures in the afternoon. Sunday (10/30), continued with the snow & cold, but less wind. Not much snow has accumulated from these storms.

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